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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/707,275	12/02/2003	Hui-Kai Chou	ADTP0112USA	1274
27765	7590	01/20/2006	EXAMINER	
NORTH AMERICA INTELLECTUAL PROPERTY CORPORATION P.O. BOX 506 MERRIFIELD, VA 22116			TRAN, THUY V	
			ART UNIT	PAPER NUMBER
			2821	

DATE MAILED: 01/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/707,275	Applicant(s) CHOU, HUI-KAI	
	Examiner Thuy V. Tran	Art Unit 2821	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on amendment submitted on 10/25/2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 12-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 12-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This is a response to the Applicant's amendment submitted on 10/25/2005. In virtue of this amendment, claims 1-11 are canceled; and thus, claims 12-22 are now presented in the instant application.

Claim Objections/ Minor Informalities

1. Claim 1 is objected to because of the following informalities:

Claim 1, lines 11 and 12, "lamps" should be changed to --lamp--.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

3. Claims 12-22 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

With respect to claim 12, the recitation "so that all of the high and low ... another U-shaped or C-shaped lamps along the first direction" in lines 7-11 renders the claim indefinite since it is believed to be mis-descriptive. As clearly shown in Figs. 2-4 of the disclosure of the instant application, all the high and low voltage electrodes are not positioned in a line along the first direction (assuming one side being defined as a line), and not the high voltage electrode of of each of the U-shaped is adjacent to the low voltage electrode of another U-shaped lamp along the first direction (the high voltage electrode of the first U-shaped lamp is not adjacent to the low voltage electrode of the last one). Clarification is required.

Claims 13-22 are rejected under 35 U.S.C. 112, second paragraph, since they are dependent on claim 12.

With respect to claim 19, the recitation “wherein each of the high voltage electrodes is adjacent to two low voltage electrodes positioned in the line” renders the claim indefinite since it is believed to be mis-descriptive. As clearly shown in Figs. 2-4 of the disclosure of the instant application, all the high and low voltage electrodes are not positioned in a line along the first direction (assuming one side being defined as a line), and not the high voltage electrode of each of the U-shaped is adjacent to the low voltage electrode of another U-shaped lamp along the first direction (the high voltage electrode of the first U-shaped lamp is not adjacent to the low voltage electrode of the last one). Clarification is required.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 12-17 and 19-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yajima et al. (Pub. No.: US 2001/0050735 A1) in view of Fan et al. (Pub. No.: US 2003/0142059 A1).

With respect to claim 12, as to the best interpretation, Yajima et al. discloses, in Fig. 19, a backlight source disposed under a display panel, the backlight source comprising a plurality of parallel U-shaped lamps [35], each of which comprises a bending portion, and the U-shaped lamps being reverse disposed side by side along a first direction. Yajima et al. does not disclose

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that (i) each of the lamps comprises a high voltage electrode at one end and a low voltage electrode at another end, (ii) some of the high and low voltage electrodes are positioned in at least a line along the first direction, and (iii) the high voltage electrode of each of the U-shaped lamps is adjacent to the low voltage electrode of the same lamp. In other words, Yajima et al. does not teach a type of U-shaped lamp having one high voltage electrode at one end and one low voltage electrode at another end.

Fan et al. discloses, in Fig. 2a, a backlight system employing U-shaped lamps [21], each having one high voltage electrode at one end and one low voltage electrode at another end.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the backlighting system of Yajima et al. by employing the type of U-shaped lamp having one high voltage electrode at one end and one low voltage electrode at another end, in lieu of the type of U-shaped lamp having a plurality of high and low voltage electrodes of Yajima et al. (as such, some of the high and low voltage electrodes being positioned in at least a line along the first direction, and the high voltage electrode of each of the U-shaped lamps being adjacent to the low voltage electrode of the same lamp) for size reduction and cost savings since the employment of such type of U-shaped lamps for the stated purpose has been well known in the art as evidenced by the teachings of Fan et al. (see paragraph [0007], lines 3-4).

With respect to claim 13, the combination of Yajima et al. and Fan et al. disclose that the backlight source is installed in a direct-type backlight panel unit (which is television; see Yajima et al.; paragraph [0001], line 3-4).

With respect to claim 14, the combination of Yajima et al. and Fan et al. disclose, in Fig. 13 of Yajima et al., that the direct-type backlight unit comprises a diffuser [52] disposed

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between the display panel and the plurality of the U-shaped lamps for scattering a light source generated by the plurality of the U-shaped lamps to the display panel, a light diffuser plate [50] disposed between the diffuser [52] and the plurality of the U-shaped lamps for transmitting the light source to the diffuser [52], and a reflecting plate [36] disposed under the plurality of the U-shaped lamps for reflecting the light source to the light diffuser plate [50].

With respect to claim 15, the combination of Yajima et al. and Fan et al. disclose, in Fig. 13 of Yajima et al., that the direct-type backlight panel unit further comprises a housing [500] disposed under the reflecting plate [36] for surrounding the reflecting plate [36], and a bezel [800] for assembling the display panel and the backlight source.

With respect to claim 16, the combination of Yajima et al. and Fan et al. disclose that the U-shaped lamp is a cold cathode fluorescent lamp (CCFL) (see Yajima et al.; paragraph [0008], line 4).

With respect to claim 17, the combination of Yajima et al. and Fan et al. disclose, in Fig. 19 of Yajima et al., that each of the U-shaped lamps is bent in a reverse direction to the adjacent U-shaped lamps so that the high and low voltage electrodes are positioned in two lines along the first direction.

With respect to claim 19, as to the best interpretation, the combination of Yajima et al. and Fan et al. disclose that each of the high voltage electrodes is adjacent to two low voltage electrodes positioned in the line, except the first lamp in line along the first direction (after replacing the lamps of Yajima et al. with the ones taught by Fan et al.).

With respect to claim 20, Yajima et al. discloses, in Fig. 31C and 31F, that the backlight source further comprises a power supply [PS] for providing current and a control circuit

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(including a transformer and an inverter; see Fig. 31F) electrically connected to the power supply for driving the backlight source.

With respect to claim 21, the combination of Yajima et al. and Fan et al. disclose, in Fig. 31F of Yajima et al., that the control circuit comprises one inverter electrically connected to the high voltage electrode and the low voltage electrode of the corresponding U-shaped lamp.

With respect to claim 22, the combination of Yajima et al. and Fan et al. disclose, in Fig. 31F of Yajima et al., that the inverter comprises a direct current/alternating current (DC/AC) inverter.

Allowable Subject Matter

6. Claim 18 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

7. The following is a statement of reasons for the indication of allowable subject matter:

Prior art fails to disclose or fairly suggest a backlight source disposed under a display panel wherein each of the U-shaped lamps has an opening defined by its two ends and bending portion, and one end of each of the U-shaped lamps is positioned inside the opening of one of the adjacent U-shaped lamps, in combination with the remaining claimed limitations as called for in claim 18.

Remarks and conclusion

8. Applicant's arguments, see Amendment, filed 10/25/2005, with respect to the rejection(s) of claim(s) 12-22 under 35 U.S.C. 103(a) have been fully considered and are persuasive.

Therefore, the rejections have been withdrawn. However, upon further consideration, a new

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ground(s) of rejection is made in view of the combined teachings of Yajima et al. and Fan et al. (see "Claim Rejections – 35 U.S.C. § 103" set forth above for details).


Inquiry

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thuy V. Tran whose telephone number is (571) 272-1828. The examiner can normally be reached on M-F (8:00 AM -5:00 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Don Wong can be reached on (571) 272-1834. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

01/12/2006



THUY V. TRAN
PRIMARY EXAMINER